

CLAIMS

1. An exhaust pipe valve, comprising:
 - a housing;
 - a bearing sleeve mounted in the housing and having a primary bearing surface;
 - a valve spindle rotatably mounted in the bearing sleeve and having a primary sealing surface that cooperates with the primary bearing surface of the bearing sleeve;
 - a valve plate mounted at the valve spindle, wherein the primary bearing surface of the bearing sleeve faces the valve plate;
 - a washer arranged on the valve spindle, wherein the washer cooperates with the bearing sleeve on a side of the bearing sleeve that faces away from the valve plate; and
 - a spring that biases the primary sealing surface of the valve spindle against the primary bearing surface of the bearing sleeve while biasing the washer against the bearing sleeve.
2. The exhaust pipe valve according to claim 1, wherein the side of the bearing sleeve that faces away from the valve plate is a secondary bearing surface, and wherein the washer has a secondary sealing surface that cooperates with the secondary bearing surface.
3. The exhaust pipe valve according to claim 2, wherein at least one of the primary sealing surface, the secondary sealing surface, the primary bearing surface and the secondary sealing surface has a conical profile.
4. The exhaust pipe valve according to claim 1, wherein at least one of the primary sealing surface and the primary bearing surface has a conical profile.
5. The exhaust pipe valve according to claim 1, further comprising a nut mounted on the valve spindle, wherein the spring is disposed between the nut mounted on the valve spindle and the washer.
6. The exhaust pipe valve according to claim 5, wherein the spring is a spring washer.

7. The exhaust pipe valve according to claim 1, wherein the spring is made from a nickel-chromium-iron alloy.

8. The exhaust pipe valve according to claim 7, wherein the nickel-chromium-iron alloy is INCONEL.

9. The exhaust pipe valve according to claim 1, wherein the valve spindle is made from steel.

10. The exhaust pipe according to claim 9, wherein the steel has a Werkstoff No. 1.4122 or 1.4104.

11. The exhaust pipe valve according to claim 1, wherein the valve plate is mounted centrically at the valve spindle and cooperates with an inner wall of the housing.

12. The exhaust pipe valve according to claim 1, wherein the valve plate is mounted eccentrically at the valve spindle and cooperates with two valve seats in an interior of the housing.

13. The exhaust pipe valve according to claim 1, further comprising a lever attached to the valve spindle for operation of the valve plate.

14. The exhaust pipe valve according to claim 1, wherein the bearing sleeve is press-fitted into the housing.

15. The exhaust pipe valve according to claim 14, wherein the housing comprises a cylindrical portion in which the bearing sleeve is fitted.

16. The exhaust pipe valve according to claim 1, wherein the bearing sleeve is fixed in the housing in a form-locking manner.

17. The exhaust pipe valve according to claim 1, wherein the bearing sleeve is made from steel.

18. The exhaust pipe valve according to claim 17, wherein the steel has a Werkstoff No. 1.4122 or 1.4104.

19. The exhaust pipe valve according to claim 1, further comprising a ceramic coating disposed on at least a portion of at least one of the valve spindle and the washer.

20. The exhaust pipe valve according to claim 19, wherein the ceramic coating comprises at least one selected from the group consisting of titanium, aluminum, and chromium.

21. The exhaust pipe valve according to claim 20, wherein the ceramic coating further comprises at least one of yttrium and nitrogen.

22. The exhaust pipe valve of claim 19, further comprising a second ceramic coating disposed on the ceramic coating, wherein a second ceramic coating is disposed over the first coating, wherein the second coating comprises at least one selected from the group consisting of titanium, aluminum, and chromium.